



Atmospheric Science, Tests For Station Aboard STS-85

The countdown began Monday afternoon for a planned launch Thursday of NASA's sixth Space Shuttle mission of 1997. The flight will be highlighted by deployment and retrieval of a satellite designed to study Earth's middle atmosphere, along with a test of potential International Space Station hardware.

The launch window for Discovery and a six-member crew on mission STS-85 extends for one hour, 39 minutes, beginning at 9:41 a.m. CDT. Nominal flight duration is 10 days and approximately 20 hours, putting the Kennedy Space Center landing on Monday, Aug. 18 at 6:05 a.m. CDT.

Discovery's crew will be made up of Commander Curt Brown, Pilot Kent Rominger, Mission Specialists Jan Davis, Robert Curbeam and Steve Robinson and Canadian Payload Specialist Bjarni Tryggvason.

The prime payload for the flight, the Cryogenic Infrared Spectrometers and Telescopes for the Atmosphere-Shuttle Pallet Satellite-2 (CRISTA-SPAS-2) is making its second flight on the Space Shuttle and is the fourth mission in a cooperative venture between the German Space Agency (DARA) and NASA.

The Marshall Center will also be represented by the Protein Crystallization Apparatus for Microgravity payload.

STS-85 will be Discovery's 23rd flight in space, tying it with Columbia as the Orbiter with the most missions.



The STS-85 flight crew members pose at the 195-foot level of Launch Pad 39A with the Space Shuttle Discovery in the background during Terminal Countdown Demonstration Test activities for that mission. They are (from left) Mission Specialist Stephen Robinson; Payload Specialist Bjarni Tryggvason; Mission Specialist Robert Curbeam; Payload Commander Jan Davis; Commander Curtis Brown; and Pilot Kent Rominger.

Summer Faculty Program Ends Productive Session

Fifty one faculty members from colleges and universities across the country this week are wrapping up their participation at Marshall in NASA's Summer Faculty Fellowship Program, in which they conduct important research for the space program while at the same time enriching their teaching skills.

The program pairs a professor with a NASA colleague to stimulate an exchange of ideas. Program participants attend weekly seminars during the 10-week program to learn about various Marshall projects. At the end of the summer, the faculty members will present reports of their research findings to their NASA colleagues.

"Over the summer the visiting faculty member significantly contribute to Marshall's research objectives," said Dr. Jim Dowdy, Marshall's University Affairs Officer.

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Two Cosmonauts Headed for Mir

A giant Soyuz rocket blasted off Tuesday, carrying two replacement crew members to Russia's Mir space station, where they were to join the current crew consisting of two veteran cosmonauts plus U.S. astronaut Mike Foale.

The launch of a Russian Soyuz TM-26 capsule with the Mir 24 crew — Commander Anatoly Solovyev and Flight Engineer Pavel Vinogradov — occurred at 10:35 a.m. CDT Tuesday from the Baikonur Cosmodrome in Kazakhstan.

Cosmonauts Vasily Tsibliyev and Alexander Lazutkin are scheduled to depart the Mir on Aug. 14 and return to Earth after 185 days in space. Foale, who was taken to Mir aboard the Shuttle Atlantis in mid-May, will continue his tour of duty until Atlantis again flies to Mir in late September and brings his replacement, David Wolf.

Meanwhile, as the Mir 23 crew awaited their replacements, on Monday they were working on the Elektron oxygen-generating unit which turned itself off when activated over the last few days. Engineers on the ground were analyzing the problem, believed to involve air bubbles in the system.

'Live the Dream' at Marshall Center's Annual Picnic Oct. 4

by Carole McLemore, Picnic Committee

Last year's picnic which was held in the fall was so well received that the picnic committee decided to stay with that timeframe again according to Picnic Chairperson Dennis Keim. "With all the activities that have gone on so far this year and the great response by the employees, it just made sense to stick with the later date," commented Keim. "The picnic has traditionally been the largest employee-attended event at Marshall, and the picnic committee is working hard to make sure that, with new ideas and activities, it will continue to be an enjoyable day for the young and the young at heart."

The 1997 picnic theme and graphics, "Living the Dream", were chosen by the committee members to reflect the public's fascination with space exploration and, as NASA employees and contractors, to renew our belief in what a privilege it is to be a part of making that fantasy a reality.

"I believe there is an enormous amount of pride and satisfaction within the NASA family on what has been accomplished and what the future holds for us. As NASA employees, we live and work within the fantasy of space exploration everyday. As individuals we have an opportunity to

encourage our children to dream and look to the future with enthusiasm on what role they might play," said Keim. "We are very excited with how this year's picnic theme and graphics reflect that philosophy."

In addition to Keim, AI44, the committee includes vice-chairs Rhonda Stricklin, BR10, Activities; David Reynolds, CN41, Facilities; Teresa Foley, GP22C, Administration; and 60 committee members. Stay tuned for future information concerning exhibits and sports team entries, entertainment, and, of course, volunteer recruitment. Let's make this one of the best picnics ever!



Project LIGHT Team Has Ideas for Improving Center Directives

The Project Light Marshall Management Instructions (MMI) Structure and Process Team recently presented its final report at a meeting of the Project Light Center Team. In its report, the MMI Team recommended a new structure for the Marshall Center Directives System, as well as some improvements to the processes used for adding, changing, or canceling Marshall directives. During its report, the team also reported on efforts to reduce the number of directives at Marshall, and demonstrated the new system for accessing Center directives through "Inside Marshall."

The Project Light MMI Structure and Process Team was chartered to address the concern that Center policy and procedural directives are burdensome and outdated and are a deterrent to enhancing processes and decisions. The team was asked to define an appropriate structure for MSFC's directives system and to recommend process improvements.

The team was also tasked to work with center organizations to review current MMIs to determine whether they are up to date and appropriate for inclusion in the Marshall Center Directives System.

Regarding this task, the team reported that all center organizations had made progress in reducing the number of directives (Marshall Management Instructions and Marshall Manuals) under their responsibility. Total directives are down to 123, compared to the 264 that existed in 1994. The team reported that, based on its discussions with the various organizations at the Center, approximately 30 more directives are scheduled to be canceled or merged into other ones.

Defining a new structure for the Marshall's directives system proved to be a challenging task for the team. "The problem was that we needed a structure that was compatible with both the Headquarters directives system and Marshall's ISO 9000 effort, and both of those systems were moving targets," according to Jim Frees, who served as the team leader. "As the Headquarters directives system and Marshall's ISO 9000 implementation plans became better defined, we were able to outline a proposed system for Marshall directives that should be compatible with both."

Under the proposed system, which has been approved by the Project Light

Executive Steering Committee, there will be four levels of directives and instructions, mirroring the four levels of documentation under ISO 9000. The first two levels will constitute the Marshall Directives System. Level one will be Marshall Policy Directives (MPDs), which will be short policy documents similar to the agency-level NASA Policy Directives. These MPDs will replace Marshall Management Instructions. The second level of directives will be Marshall Procedures and Guidelines (MPGs), which are similar to NASA Procedures and Guidelines. These MPGs will provide procedural guidance, and they will replace Marshall Manuals in the directives system. The third and fourth levels will be "work instructions," mirroring the centerwide work instructions and organizational work instructions of the ISO 9000 system. As soon as it is practicable to do so, the directives system and the ISO 9000 documentation system will be merged into a single system.

Among the other recommendations of the team was a proposal to streamline the

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Employee Update Set for Aug. 20

An Employee Information Update will be held on Aug. 20 at 10 a.m. in Building 4200, Morris Auditorium. Employees may submit questions to the Center Director by sending an e-mail to Judy Werner no later than Aug. 6. Anonymous questions may be submitted in a sealed envelope to CO01/Judy Werner. Employees who are unable to attend may view the Update on Centerwide closed circuit television.

Spencer to Speak on Equality Day

Huntsville Mayor Loretta Spencer will be the featured speaker at Marshall's Women's Equality Day Program on Aug. 26 at 9 a.m. in Morris Auditorium, Building 4200.

MMI Team Reports

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directives review process by using a steering committee to accelerate the review of proposed additions or changes to Marshall directives. "This will not replace each office of responsibility's preliminary work of distributing a draft and integrating comments received from other affected organizations," according to Annette Tingle, Marshall's acting Directives Manager and a member of the Project Light team. "It should, however, help alleviate the frustrating delay in getting changes through the final review process."

In reviewing the Center's directives system, the team recognized that, for directives to be useful, employees need to be able to find them easily and quickly, and know that they've got the current version. "We wanted Marshall's directives to be accessible on Inside Marshall, and to be easily searchable," Frees stated. "Through the efforts of ISSO and CSC, working with the Management Operations Office, we have that now."

Frees praised the efforts of the team members. "This was not an easy task, and all of the team members worked hard to ensure the success of the effort." In addition to Frees and Tingle, other team members included Steve Beale (co-leader of the team), Cecelia Culver, Mary Cooper, Larry Fine, Justin Jackson, Carolyn Lundy, Pat Martin, Mike Sosebee, and Amanda Wilson. Carolyn Landry served as the facilitator for the team. Dave Carstens served as the leader of the team before being assigned to chair a Source Evaluation Committee earlier this year.

Obituaries

Bailey, Donald, 71, Huntsville, died June 23. He retired from Marshall in 1973 where he worked as an industrial specialist.

Williams, Dan, 76, Huntsville, died June 25. He retired from Marshall in 1978 where he worked in Reliability and Quality Assurance.



This Hubble Space Telescope image of a galaxy cluster has revealed, with the aid of a gravitational lens, the image of a far more distant galaxy. The gravitationally-lensed image appears as a crescent-shaped object in the lower righthand quadrant of the photo. The foreground cluster is five billion light-years away, while the background galaxy may be as far as 13 billion light-years distant.

Hubble Views Farthest Galaxy

An international team of astronomers has discovered the most distant galaxy found in the universe to date, by combining the unique capabilities of NASA's Hubble Space Telescope with the light-collecting power of the W. M. Keck Telescopes and using the added boost of a gravitational lens in space.

The results show the young galaxy is as far as 13 billion light years from us, placing it far back in time during the "formative years" of galaxy evolution, less than a billion years after the birth of the universe in the Big Bang.

Predicted by Einstein's theory of general relativity, gravitational lenses are collections of matter (such as clusters of galaxies) that are so massive they warp space in their vicinity, allowing the light of even more-distant objects to curve around the central lens-mass and be seen from Earth as greatly magnified.

The Hubble telescope is now in its eighth year of operation. A Marshall-managed project, it was launched aboard the Shuttle in 1990.

Summer Program

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Dowdy noted that participants have been engaged in an array of projects, spanning a broad spectrum from eutectic crystal growth, to analyzing loads and aeroelastic effects for the X-33 reusable launch vehicle, to improving friction stir welding technology.

"We want the Summer Faculty Fellowship Program to further the professors' science and engineering knowledge as well as enrich and refresh their teaching activities. Hopefully, they will use what they have learned to better guide students in science and engineering," said Dowdy.

Employee Ads

Miscellaneous

- ★ Microsoft office 97 professional full version, new, unused, CD-ROM \$175. 725-4411
- ★ Dept 54 "Christmas in the city" items, most discontinued; ADS home stereo subwoofer \$70. 350-7461
- ★ Ping pong table with net and paddles \$50, Sears Powerglide 300 skier/rower \$75. 464-9510
- ★ White floor length wedding dress, off-the-shoulder, balloon sleeves, size 8-10, accessories included \$150. 536-2363
- ★ Bicycle, Trek 400, 21 inch frame, road bike \$125. 232-1940
- ★ Stereo in glass case, CD player, dual cassette, 100-watt speakers. 837-9717
- ★ Daniel Moore's Grand Finale and Winning Connection beautifully framed and double matted. 883-5114
- ★ Couch \$50; matching recliner \$25; dinette \$50; bedroom suite includes mattress/springs \$50; end table \$15. 883-2044
- ★ Infant walker \$15. 837-5113
- ★ Weight bench w/squat rack and 150 lbs. metal weights \$100; weedeater, XR-50 trimmer \$40. Call after 6 p.m. 851-6014
- ★ 40 piece Mikasa Garden Harvest stoneware, serving pieces included \$350. 536-2363
- ★ 1986 Dynasty Apollo LS 18' 200 HP Mercruiser I/O, 252 hours, extras \$6,000 or bao. 881-6670

Vehicles

- ★ 1976 Jeep J10, pickup, 4x4, V-8 \$1,450. 837-0085
- ★ 1992 GMC Safari SLE extended van, ABS, dual A/C, luggage rack, full power \$8,500. 890-0896
- ★ 1996 Camry LE, 4-door, automatic, PW/locks, 32K miles \$15,900. 773-6985
- ★ 1996 Coleman pop-up camper, A/C, stove, refrig., awning, sleeps, six comfortably \$4,800. 650-2173
- ★ 1990 GMC Jimmy 4x4, gypsy package, one owner, 74K miles \$7,900. 828-4273
- ★ 1992 Ford Ranger sport, 3.0 ltr., V-6, new tires/brakes \$5,500. 881-9816
- ★ 1995 Honda Shadow, 600 CC, 650K miles, saddlebags included \$4,650 o.b.o. 721-1303
- ★ 1994 Chevy Camaro, 6 cyl., automatic, 54K miles \$9,800 o.b.o. 232-0246
- ★ 1985 Toyota Camry, 29K miles \$5,100. 881-1895
- ★ 1983 Chevy C10 Pickup truck, auto, V-8 \$3,200. 353-5861
- ★ 1986 Honda Accord LX, 4-door, 5-speed \$2,900;
- ★ 1985 Dodge 600 ES convertible \$3,800. 830-4477

Vehicle

- ★ 1985 Honda Accord LX, 4-door, auto, A/C, PW, PL, 125K miles \$2,500. 859-2610
- ★ 1989 Eagle Summit, A/C, new tires, NADA wholesale \$1,225. 536-8925
- ★ 1995 Chevrolet Lumina LS, 4-dr., 38K miles, power, ABS, alloys, cruise, cassette, remote entry \$12,500. 751-2131

Wanted

- ★ Brass/iron queen size bed frame and apartment washer/dryer. 880-9025

Center Announcements

- ✦ **Washington Update Luncheon** — A luncheon with Congressman Bud Cramer will be held August 8 at 12 noon in the VBC, North Hall. For more information call Mary Rutledge at 4-5252.
- ✦ **Luau Dinner Dance** — The MARS Ballroom Dance Club Luau will be held in the VBC West Hall on August 9. Social begins at 6:30 p.m., followed by a buffet dinner at 7 p.m. Tickets may be purchased from Tamara Landers (4-6818), Pat Sage (4-5427), Ed Ogozalek (837-1486), and Bob Williams (4-3998). Call Woody Bambara (650-0200) for a table for eight.
- ✦ **Stop Abuse** — Aware of waste, fraud or abuse? Telephone the Marshall Office of Inspector General at 4-9188 or send complaints to Mail Stop M-DI. Confidentiality will be maintained.
- ✦ **Winning Strategies** — August 7 will be the last chance for employees to take the Winning Strategies course. Send participant names to CM21/Renee Higgins.
- ✦ **Bowling League** — The MARS Bowling League will hold an organizational meeting on August 19 at 6 p.m. at Monarch Lanes. Team captain or a member of each team should attend. The league will begin on September 2 at 6 p.m. For more information call Chuck Seal at 4-1120 or Steve Rogers at 4-2973.
- ✦ **NARFE** — The National Association of Retired Federal Employees will meet August 9 at the Senior Center on Drake Avenue. Carol Martin will discuss one-day group trips in the Tennessee Valley area which are designed for seniors. Refreshments at 9:30 a.m., program at 10 a.m. For more information, call 837-0382 or 881-3168
- ✦ **EWS** — The monthly test of the Emergency

Warning System has been scheduled for August 7 at 3 p.m. This is an audio test only. DO NOT evacuate to protective areas. If severe weather is occurring at this time, the test will be rescheduled to a later date. Any malfunctioning speakers should be reported to AB11/Emergency Preparedness Officer.

- ✦ **MARS Fishing Club** — The results of the MARS Fishing Club tournament held at Browns Creek (Guntersville Lake) on July 12 are as follows: 1st place - Ross Evans and Deon Smith, 6 fish at 14.98 lbs; 2nd place - Ken Anthony and Alex Rawleigh, 3 fish at 14.66 lbs; 3rd place - John Harbison and Mike Vanhooser, 5 fish at 13.73 lbs; big fish honors went to Ken Anthony at 6.02 lbs. The next tournament is a night tournament at Wilson Lake on August 16. For more information call Don McQueen at 4-9073 or Ross Evans at 5-2305.
- ✦ **Toastmasters International** — Toastmasters International will have a lunch meeting each Tuesday from 11:30 a.m. to 12:30 p.m. in Building 4610 cafeteria conference room.

Job Opportunities

CPP 97-84-DC, AST, Liquid Propulsion Systems, GS-861-14, S&E, Space Trans Sys Ch Engrs, Space Shuttle Main Engine, Turbomachinery Development. Closes August 7.

CPP 97-95-TH, Configuration Management Specialist, GS-301-7, S&E, Systems Analysis and Integration Lab, Configuration Mgmt Div, Project Support Br. Closes August 8.

CPP 97-92-CV, AST, Heat Transfer, GS-861-14, S&E, Structures & Dynamics Lab, Thermal & Life Spt Div, Thermal Engr. Design Branch. Closes August 8.

CPP 97-94-SH, AST, Liquid Propulsion Systems, GS-861-14, S&E, Propulsion Lab, Component Dev. Div., Combustion Devices and Propulsion Design Br. Closes August 8.

CPP 97-93-CP, Accountant, GS-510-13/14, Office of Chief Financial Officer, Systems and Processes Office. Closes August 8.

CPP 97-90-JB, Contract Specialist, GS-1102-12, (2 positions), Procurement Office. Closes August 14.

CPP 97-65-CL, Facility Management Specialist, GS-1602-12, I&PS, Facilities Office, Planning & Integration Division. Closes August 14.

CPP 97-86-TH, AST, Aerospace Flight Systems, GS-861-14, S&E, Systems Analysis & Integration Lab, Technical Staff Office. Closes August 14.

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